

**WHAT IS CLAIMED IS:**

1 1. A method comprising the steps of:  
2 receiving video data;  
3 generating a first version of the video data having a first resolution scale;  
4 generating a second version of the video data having a second resolution scale different from  
5 the first resolution scale;  
6 providing the first version as a first multicast video stream for reception by a first subset of a  
7 plurality of display devices; and  
8 providing the second version as a second multicast video stream for reception by a second  
9 subset of the plurality of display devices concurrent with the step of providing the  
10 first version.

1 2. The method of Claim 1, wherein the display devices include wireless display devices.

1 3. The method of Claim 2, wherein the steps of providing the first version and the second version  
2 includes providing the first version and the second version as a wireless transmission.

1 4. The method of Claim 3, wherein the wireless transmission is based on a IEEE 802.11 standard.

1 5. The method of Claim 1, wherein the steps of providing the first version and providing the second  
2 version include:  
3 determining a first multicast address associated with the first subset;  
4 determining a second multicast address associated with the second subset;  
5 multicasting the first multicast video stream to the first multicast address; and  
6 multicasting the second multicast video stream to the second multicast address.

- 1       6. The method of Claim 1, wherein the step of generating the first version of the video data includes
- 2            transcoding the video data.
  
- 1       7. The method of Claim 1, wherein the video data includes MPEG video data.

1 8. A method comprising the steps of:  
2     multicasting a first version of a received video using a first multicast address, the first  
3         version having a first resolution scale; and  
4     multicasting a second version of the received video using a second multicast address  
5         concurrent with the step of multicasting the first version, the second version having a  
6         second resolution scale different from the first resolution scale.

1 9. The method of Claim 8, wherein the steps of multicasting the first version and the second version  
2         include multicasting the first version and the second version as a wireless transmission.

10. The method of Claim 9, wherein:  
the first version is multicast over a first channel of the wireless transmission, the first  
channel having a first data transmission rate; and  
the second version is multicast over a second channel of the wireless transmission, the  
second channel having a second data transmission rate different from the first data  
transmission rate.

11. The method of Claim 9, wherein the wireless transmission is based on a IEEE 802.11 standard.

12. The method of Claim 8, wherein the video data includes MPEG video data.

1 13. A method comprising the steps of:  
2       providing over a wireless medium a first version of a received video having a first resolution  
3           scale to a first subset of a plurality of display devices, the first subset of display  
4           devices having a first common data transmission rate; and  
5       providing over a wireless medium a second version of the received video having a second  
6           resolution scale to a second subset of the plurality of display devices concurrent with  
7           the step of providing the second version, the second subset of display devices having  
8           a second common data transmission rate different from the first common data  
9           transmission rate.

14. The method of Claim 13, wherein the steps of providing the first version and the second version  
15       include providing the first version and the second version over the wireless medium based on  
16       a IEEE 802.11 standard.

15. The method of Claim 13, wherein the steps of providing the first version and providing the  
16       second version include:  
17           determining a first multicast address associated with the first subset;  
18           determining a second multicast address associated with the second subset;  
19           multicasting the first multicast video stream to the first multicast address; and  
20           multicasting the second multicast video stream to the second multicast address.

1 16. The method of Claim 13, wherein the video data includes MPEG video data.

1 17. A method comprising the steps of:  
2 generating at a video transcoder a first encoded version of a received video;  
3 generating at the video transcoder a second encoded version of the received video;  
4 providing the first encoded version for reception by a first plurality of display devices using  
5 a first channel of a multicast of the received video stream, wherein the first channel  
6 supports a first data transmission rate; and  
7 providing the second encoded version for reception by a second plurality of display devices  
8 using a second channel of the multicast of the received video stream, wherein the  
9 second channel supports a second data transmission rate different from the first data  
10 transmission rate.

18. The method of Claim 17, wherein the display devices include wireless display devices.

19. The method of Claim 18, wherein the steps of providing the first encoded version and the  
second encoded version includes providing the first version and the second version as a  
wireless transmission.

20. The method of Claim 19, wherein the wireless transmission is based on a IEEE 802.11 standard.

1 21. The method of Claim 17, wherein the steps of providing the first encoded version and providing  
2 the second encoded version include:  
3 determining a first multicast address associated with the first plurality;  
4 determining a second multicast address associated with the second plurality;  
5 multicasting the first multicast video stream to the first multicast address; and  
6 multicasting the second multicast video stream to the second multicast address.

1 22. The method of Claim 17, wherein:

2 the step of generating the first encoded version includes transcoding the received video to

3 generate the first encoded version having a first resolution scale; and

4 the step of generating the second encoded version includes transcoding the received video to

5 generate the second encoded version having a second resolution scale different from

6 the first resolution scale.

1 23. The method of Claim 17, wherein the received video includes MPEG video.

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1 24. A method comprising the steps of:  
2       providing a first version of a video to a wireless display device at a first data transmission  
3               rate, wherein the first version includes a first resolution scale;  
4       negotiating a second data transmission rate with the wireless display device when a  
5               communication capability of the wireless display device changes; and  
6       providing a second version of the video to the wireless display device at the second data  
7               transmission rate, wherein the second version includes a second resolution scale  
8               different from the first resolution scale.

1 25. The method of Claim 24, further including the step of determining a change in the communication  
2               capability of the wireless display device.

26. The method of Claim 24, wherein the communication capability of the wireless display device  
includes a rate by which data can be received by the wireless display device.

27. The method of Claim 24, wherein the first version and the second version are provided based on  
a IEEE 802.11 standard.

1 28. The method of Claim 24, wherein the steps of providing the first version includes:  
2       determining a first multicast address associated with the wireless display device based on a  
3               first communication capability of the wireless display device; and  
4       multicasting the first version to the first multicast address.

- 1 29. The method of Claim 28, wherein the step of providing the second version includes:
  - 2 determining a second multicast address associated with the wireless display device based on
  - 3 a second communication capability of the wireless display device different from the
  - 4 first communication capability; and
  - 5 multicasting the second version to the second multicast address.
  
- 1 30. The method of Claim 24, wherein the video includes MPEG video data.

1 29. The method of Claim 28, wherein the step of providing the second version includes:  
2 determining a second multicast address associated with the wireless display device based on  
3 a second communication capability of the wireless display device different from the  
4 first communication capability; and  
5 multicasting the second version to the second multicast address.

1 31. A method comprising the steps of:

2       determining at a display device a first data transmission rate between the display device and

3            a wireless access point;

4       determining a first channel of a plurality of channels of a multicast channel based on the first

5            data transmission rate, wherein each channel of the plurality of channels is used to

6            provide a different version of a plurality of versions of a video, and where each

7            version of the video includes a different resolution scale; and

8       accessing the first channel to receive a version of the video stream associated with the first

9            channel.

32. The method of Claim 31, wherein the multicast channel is based on a IEEE 802.11 standard.

33. The method of Claim 31, wherein the video stream includes an MPEG video stream.

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1 34. A video server to multicast video comprising:  
2       an input interface having an input and an output, said input interface to receive a video using  
3           the input;  
4       an encoder having an input coupled to the output of said input interface and an output; said  
5           encoder to generate at least a first version of the video having a first resolution scale  
6           and a second version of the video having a second resolution scale; and  
7       a network interface having an input coupled to the output of said encoder and an output  
8           coupled to a network, said network interface to multicast the first version of the video  
9           to a first subset of a plurality of display devices and to multicast the second version  
10          of the video to a second subset of the plurality of display devices.

35. The video server of Claim 34, wherein said encoder includes a transcoder.

36. The video server of Claim 35, wherein said encoder includes an MPEG transcoder.

37. The video server of Claim 34, wherein said network interface includes a wireless network  
interface.

1 38. The video server of Claim 37, wherein said wireless network interface is adapted to transmit  
2       data based on an IEEE 802.11 standard.

1 39. The video server of Claim 34, further including a video multicast control having an output  
2       coupled to the input of said encoder, wherein said video multicast control is to direct the  
3       generation of the first version and the second version by said encoder.

1 40. The video server of Claim 39, wherein said video multicast control includes an output coupled  
2 to the input of said network interface, and wherein said video multicast control further is to  
3 determine a first data transmission rate associated with the first subset of display devices and  
4 to determine a second data transmission rate associated with the second subset of display  
5 devices.

1 41. The video server of Claim 40, wherein said video multicast control further is to provide a first  
2 multicast address to said network interface for the multicast of the first version based on the  
3 first data transmission rate and to provide a second multicast address to said network  
4 interface for the multicast of the second version based on the second data transmission rate.